AMENDMENTS TO THE CLAIMS

For the examiner's convenience, all pending claims are set forth in the following listing of claims and have been amended where noted:

Listing of Claims:

1. (Currently Amended) A brake control system ~~for a wheel of a vehicle in motion,~~ comprising:

[[a)]] an accelerometer ~~attached to the vehicle and~~ configured to measure a linear deceleration of [[the]] a vehicle body and output a measured deceleration signal;

[[b)]] a brake pressure sensor configured to output a brake pressure signal; and

[[c)]] a brake controller configured to:

receive the measured ~~a plurality of~~ deceleration ~~signals~~ signal from the accelerometer and calculate a change in ~~measured~~ linear deceleration over time;

receive the brake pressure signal and calculate a change in an applied brake pressure; and

calculate a brake pressure adjustment signal using the calculated change in ~~measured~~ linear deceleration over time and the calculated change in applied brake pressure.

2. (Currently Amended) A method for controlling a braking operation ~~of a wheel of a vehicle in motion,~~ comprising:

applying brake pressure to a wheel of a vehicle body;

measuring a linear deceleration of the vehicle body;

~~measuring the brake pressure applied to the wheel;~~

increasing the brake pressure to the wheel after the brake pressure has been applied, wherein the brake pressure to the wheel is increased from a first time frame to a second time frame;

calculating a change in linear deceleration of the vehicle body from [[a]] the first time frame to [[a]] the second time frame;

calculating a change in the ~~measured~~ brake pressure applied to the wheel from the first time frame to the second time frame; and

reducing the brake pressure applied to the wheel when the calculated change in ~~measured~~ linear deceleration becomes negative and the calculated change in ~~measured~~ brake pressure applied to the wheel is greater than or equal to zero.

3. (Currently Amended) The method of claim 2, wherein the ~~measured~~ change in linear deceleration is calculated ~~computed~~ as a vector equal to a hypotenuse in a right-angle triangle where longitudinal and lateral ~~acceleration~~ deceleration are equal to sides adjacent to the right-angle of the triangle.

4. (Currently Amended) The system of claim 1, wherein the vehicle body is an aircraft.

5. (Currently Amended) The system of claim 1, ~~wherein the wheel brake is~~ further comprising an automatic brake configured to receive the brake pressure adjustment signal.

6. (Currently Amended) The system of claim 1, ~~wherein the wheel brake is~~ further comprising a manual brake configured to receive the brake pressure adjustment signal.

7. (Currently Amended) The method of claim 2, wherein the vehicle body is an aircraft.

8. (Previously Presented) The method of claim 2, wherein the brake pressure is applied with an automatic brake.

9. (Previously Presented) The method of claim 2, wherein the brake pressure is applied with a manual brake.

10. (Currently Amended) The system of claim 1, wherein the ~~measured~~ change in linear deceleration over time is calculated ~~computed~~ as a vector equal to a hypotenuse in a right-angle triangle where longitudinal and lateral ~~acceleration~~ deceleration are equal to sides adjacent to the right-angle of the triangle.

11. (Currently Amended) The system of claim 1, wherein the ~~measured~~ change in linear deceleration over time comprises ~~is a vehicle~~ longitudinal deceleration ~~acceleration~~, lateral deceleration ~~acceleration~~, [[or]] vertical deceleration ~~acceleration~~, or a combination thereof.

12. (Currently Amended) The system of claim 1, wherein the brake controller is further adapted to determine a maximum braking capability of the vehicle body using the ~~measured~~ change in linear deceleration of the vehicle body.

13. (Currently Amended) The system of claim 1, wherein the vehicle deceleration signal comprises at least one of ~~a vehicle~~ longitudinal, lateral, [[or]] and vertical deceleration ~~acceleration~~ data.

14. (Currently Amended) The system of claim 1, wherein the brake controller is further adapted to output deceleration data to a data storage file or a display.

15. (Currently Amended) The method of claim 2, wherein the ~~measured~~ change in linear deceleration over time comprises ~~is a vehicle~~ longitudinal deceleration ~~acceleration~~, lateral deceleration ~~acceleration~~, [[or]] vertical deceleration ~~acceleration~~, or a combination thereof.

16. (Currently Amended) A method for controlling a braking operation of a vehicle body, comprising:

applying brake pressure to a wheel of the vehicle body;

increasing the brake pressure to the wheel for a length of time;

calculating a change in linear deceleration of the vehicle body over the length of time; ~~The method of claim 2, further comprising~~

determining a maximum braking capability of the vehicle body using the calculated change in linear deceleration of the vehicle body over the length of time; and

varying the brake pressure applied to the wheel based on the determined maximum braking capability of the vehicle body.

17. (Previously Presented) The method of claim 2, wherein brake pressure applied to the wheel is reduced by a predetermined pressure increment.

18. (Currently Amended) The method of claim 2, wherein the ~~measured~~ linear deceleration of the vehicle body represents information about optimal braking capability of the vehicle body when the calculated change in ~~measured~~ linear deceleration becomes negative and the calculated change in ~~measured~~ brake pressure applied to the wheel is greater than or equal to zero.

19. (Currently Amended) The method of claim 2, wherein ~~further comprising measuring velocity of the vehicle, and applying~~ the brake pressure applied to the wheel is reduced ~~only~~ when velocity of the vehicle body is greater than zero.

20. (Currently Amended) The method of claim 2, wherein the brake pressure applied to the wheel is increased incrementally.